

ABSTRACT OF THE DISCLOSURE

A method for fabricating a one time programmable
read only memory (OPTROM) device. A first conductive
layer, a first semiconductor layer, an anti-fuse layer, a
5 second semiconductor layer are sequentially formed on a
substrate. The second semiconductor layer, the anti-fuse /
layer, the first semiconductor layer, and the first
conductive layer are then patterned along the first
direction into a first conductive line. The second
10 semiconductor layer, the anti-fuse layer, and the first
semiconductor layer are patterned into a memory cell. A
dielectric layer is deposited over the substrate, wherein
oxygen plasma sputtering is performed to clean the
substrate before deposition. A second conductive line is
15 formed over the second dielectric layer, running
generally orthogonal to the first conductive line.